

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Keishi OSAWA, et al. ) : Examiner: Unassigned  
Application No.: Unassigned ) : Group Art Unit: Unassigned  
Filed: February 12, 2002 ) :  
For: DEVELOPING APPARATUS ) : February 12, 2002

Commissioner for Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to examination, the Examiner is respectfully requested to amend the above-identified application as follows.

IN THE SPECIFICATION

Please substitute the paragraph starting at page 9, line 3 and ending at page 9, line 4 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--Figures 6(A) and 6(B) show waveforms of a developing bias voltage.--

Please substitute the paragraphs starting at page 18, line 18 and ending at page 19, line 6 with the following replacement paragraphs. A marked-up copy of these paragraphs, showing these paragraphs, is attached.

--The two types of waveforms are shown in Figures 6(A) and 6(B), in which Figure 6(A) deals with the case in which the bias waveforms at the developing position stops at Vppmax, and Figure 6(B) deals with the case in which the bias voltage waveform stops at Vppmin.

Figure 3 illustrates a behavior of the toner adjacent the effective dropping zone when the developing bias stops with the waveform shown in Figure 6(A).

As shown in Figure 6(A), when the input signal ends at the Low, the developing bias voltage level attenuates from Vppmax (-160V) to the developing bias Vdc (A region), and the voltage is temporarily maintained at Vdc (B region), and then further attenuates to OV since the drum charging operation and Vdc stops C region).--

Please substitute the paragraph starting at page 21, line 1 and ending at page 21, line 7 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--As shown in Figure 6(B), when the input signals ends at the High, the developing bias voltage level attenuates from Vppmin (-960V) to the developing bias Vdc (A region), and the voltage is temporarily maintained at Vdc (B region), and then further attenuates to OV since the drum charging operation and Vdc stops C region).--

Please substitute the paragraph starting at page 21, line 25 and ending at page 22, line 3 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--In the B region, the situation is the same as with Figure 6(A) and Figure 3. Since the developing sleeve continues to rotate, the reversely charged toner in the toner supplied for development is always supplied, and therefore, the reversely charged toner is continuously supplied to the drum.--

REMARKS

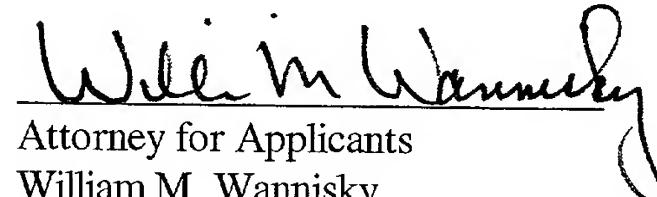
Claims 1 through 7 are present in the application. Claim 1 is the only independent claim. It is respectfully submitted that no new matter has been presented.

The specification has been amended to even more closely conform the same to the drawings. No new matter has been added.

Favorable consideration, entry of this Preliminary Amendment, and early passage to issuance of the application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 347-8100. All correspondence should be directed to our below-listed address.

Respectfully submitted,

  
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**VERSION WITH MARKINGS SHOWING CHANGES MADE TO  
SPECIFICATION**

The paragraph starting at page 9, line 3 and ending at page 9, line 4 has been amended as follows.

--Figures 6(A) and 6(B) show waveforms [Figure 6 shows a waveform] of a developing bias voltage.--

The paragraphs starting at page 18, line 18 and ending at page 19, line 6 have been amended as follows.

--The two types of waveforms are shown in Figures 6(A) and 6(B) [Figure 6], in which Figure 6(A) [(A)] deals with the case in which the bias waveforms at the developing position stops at Vppmax, and Figure 6(B) [(B)] deals with the case in which the bias voltage waveform stops at Vppmin.

Figure 3 illustrates a behavior of the toner adjacent the effective dropping zone when the developing bias stops with the waveform shown in Figure 6(A) [6 (A)].

As shown in Figure 6(A) [(A) in Figure 6], when the input signal ends at the Low, the developing bias voltage level attenuates from Vppmax (-160V) to the developing bias Vdc (A region), and the voltage is temporarily maintained at Vdc (B region), and then further attenuates to OV since the drum charging operation and Vdc stops C region).--

The paragraph starting at page 21, line 1 and ending at page 21, line 7 has been amended as follows.

--As shown in Figure 6(B) [(B) in Figure 6], when the input signals ends at the High, the developing bias voltage level attenuates from Vppmin (-960V) to the developing bias Vdc (A region), and the voltage is temporarily maintained at Vdc (B region), and then further attenuates to OV since the drum charging operation and Vdc stops C region).--

The paragraph starting at page 21, line 25 and ending at page 22, line 3 has been amended as follows.

--In the B region, the situation is the same as with Figure 6(A) [6, (A)] and Figure 3. Since the developing sleeve continues to rotate, the reversely charged toner in the toner supplied for development is always supplied, and therefore, the reversely charged toner is continuously supplied to the drum.--